

**CLAIMS**

1. A navigation device programmed with a map database and software that enables a route to be planned between two user-defined places, in which the device is further  
5 programmed (i) to be able to calculate and to display a 2-D or 3-D representation of the actual road being travelled along and the current location of the device on that road and (ii) to receive and process dynamic travel information relating to the route;  
wherein the device is adapted to calculate and to display a schematic view showing at least the remainder of the entire route, the schematic view appearing on a  
10 single screen and including dynamic travel information relating to the route.
2. The device of any preceding Claim in which the schematic view is a linear representation showing the entire route or the remainder of the route.
- 15 3. The device of Claim 1 or 2 in which an icon is displayed that represents how recently the dynamic travel information was received by the device.
4. The device of Claim 1 in which the dynamic travel information is displayed at the same time as the 2-D or 3-D representation.  
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5. The device of Claim 1 in which the dynamic travel information is only displayed at a different time from the 2-D or 3-D representation.
6. The device of any preceding Claim in which the dynamic travel information is a  
25 dynamic representation of traffic conditions.
7. The device of Claims 6 in which the dynamic representation of traffic conditions graphically represents the traffic flow direction.
- 30 8. The device of Claim 7 in which the dynamic representation of traffic conditions also graphically represents one or more of the following traffic conditions:
  - (i) stationery traffic;
  - (ii) queuing traffic;
  - (iii) slow traffic;

(iv) road closure or lane closure or road works.

9. The device of any preceding Claim in which the dynamic travel information is represented by a graphical icon or other kind of selectable option that represents one or more of the following:

- (i) accident;
- (ii) traffic jam;
- (iii) road works;
- (iv) road closure;
- 10 (v) general incident;
- (vi) lane closed;
- (v) heavy rain;
- (vi) strong winds;
- (vii) ice;
- 15 (viii) fog.

10. The device of Claim 9 in which the option can be selected by touching the option, causing the device to display more details of the dynamic travel information associated with that option.

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11. The device of any preceding Claim, wherein the user can, by touching a screen on the device, task away from the 2-D or 3-D representation of the actual road being travelled along to a menu screen which displays one or more options that, if selected through a further touch action, initiate a re-calculation of the route.

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12. The device of Claim 10 or 11 in which the touch to the screen is a single or a double touch.

13. The device of Claim 12 in which the touch has to be at a region of the touch screen sized to be sufficiently large to allow it to be reliably selected with a fingertip.

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14. The device of Claim 13 in which the region is at least  $0.7\text{cm}^2$  in area.

15. The device of Claim 11 in which the menu screen displays selectable options relating to one or more of the following functions:
- (a) calculate alternative route;
  - (b) calculate alternative route without including a predefined extent of the road ahead;
  - (c) calculate alternative route without including a predefined road;
  - (d) revert to original route.
16. The device of Claim 9 in which each selectable option is one of the following:
- (a) a graphical icon;
  - (b) a control or check box; or
  - (c) a name.
17. The device of any preceding Claim that receives dynamic travel information using a receiver for a wireless network.
18. The device of Claim 17 in which the wireless network is a short range network established between the device and a mobile telephone, the mobile telephone obtaining the dynamic travel information over a cellular wide area network.
19. The device of Claim 17 or 18 in which the dynamic travel information sent to the device comprises geocoded data that defines the location to which the dynamic travel information relates.
20. The device of Claim 17 or 18 in which the dynamic travel information sent to the device comprises non-geocoded location data that defines the location to which the dynamic travel information relates and the software on the device geocodes that data.
21. The device of Claim 20 in which the non-geocoded data is in TMC format and the device includes in memory TMC tables that it can look up in order to relate the TMC format data to a location in the geocoded co-ordinate system that the device uses so that it can display the travel information at the applicable position.

22. The device of any preceding claim that can send a request to a remote server over a wireless communications network for dynamic travel information relevant to a defined route, the remote server (i) receiving dynamic travel information from one or more data feeds in relation to numerous roads and (ii) sending the dynamic travel information that is relevant to the defined route to the device in response to the request.

23. The device of Claim 22 that regularly or at pre-defined times or intervals polls the server for updated dynamic travel information.

24. The device of Claim 22 in which the request is an initial request for dynamic travel information and subsequently the server automatically pushes updated dynamic travel information to the device.

25. A method of displaying navigation information, the method being deployed in a navigation device programmed with a map database and software that enables a route to be planned between two user-defined places, in which the device is further programmed (i) to be able to calculate and to display a 2-D or 3-D representation of the actual road being travelled along and the current location of the device on that road and (ii) to receive and process dynamic travel information relating to the route; comprising the step of the device calculating and displaying a schematic view of at least the remainder of the entire route, the schematic view appearing on a single screen and including dynamic travel information relating to the route.

26. Computer software adapted to enable a navigation device, programmed with a map database and software that enables a route to be planned between two user-defined places, to:

(i) be able to calculate and to display a 2-D or 3-D representation of the actual road being travelled along and the current location of the device on that road and (ii) receive and process dynamic travel information relating to the route;

wherein the software calculates, and causes the display of, a schematic view of at least the remainder of the entire route, the schematic view appearing on a single screen and including dynamic travel information relating to the route.